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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,907	02/21/2002	Holger Lausch	F-7329	5912

28107 7590 11/23/2004  
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EXAMINER

LE, VU

ART UNIT PAPER NUMBER

2613

DATE MAILED: 11/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/069,907	<b>Applicant(s)</b> LAUSCH, HOLGER	
	<b>Examiner</b> Vu Le	<b>Art Unit</b> 2613	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 February 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2-21-02, 9-30-04</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1-6, 9-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Tsuji, US 4,839,631.**

Re claim 4, Tsuji discloses an apparatus for detecting and analyzing the behavior of persons in at least one room in dependence on visual, audiovisual and/or auditory messages intended to influence actions and/or path of movement of said person in said at least one room (figs. 1-2, Abstract, Summary of the Invention), comprising

means for detecting time-dependently (television cameras 1A-4A) by at least one predetermined frequency (col. 3, lines 57-58), the position coordinates of each person (col. 3, lines 54-67, col. 4, lines 6-42), the body coordinates of each person, turns and rotations of each person's body and/or parts thereof as well as each person's posture and/or attitude of each person's extremities from the person's entry into up to the person's exit from the room (figs. 5-10, col. 8, line 21 – col. 11, line 68; these segments talk about detecting behavior characteristics of person(s) being tracked, these characteristics include body coordinates relative to reference coordinates of a monitored

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area, orientation of the person(s) such as standing too long, moving too slow or rapidly, entering/exiting a monitored area or region suspiciously, etc... . All of these encompass the person's behavior characteristics such as turns, rotations, posture and/or attitude as claimed)

the detecting means (figs. 1-2:1A-4A) comprising at least one sensor module in an upper position of each room (col. 4, lines 6-8) said sensor module (1A-4A) being adapted for detecting the electromagnetic radiation (col. 13, lines 11-13) from each said person present in said room, and at least one image processing module (fig.1:10) and at least one database module (fig.2:1E-4E, col. 4, lines 43-48), said sensor, image processing and database modules being operatively connected together (figs.1-2).

Re claim 5, an apparatus as claimed in claim 4, comprising a plurality of said sensor modules and said image processing modules. (See fig. 2).

Re claim 6, an apparatus as claimed in claim 5, further comprising a central evaluation and control module and wherein a plurality of said database modules are operatively connected to said central evaluation and control module. (See fig. 1:11).

Re claim 9, an apparatus as claimed in claim 4, wherein the upper portion of each room is a central area of a ceiling of the room. (Claim 9 has been analyzed and rejected w/r to claim 4).

Re claim 10, an apparatus as claimed in claim 4, wherein said at least one room comprises a plurality of contiguous rooms including areas characterized as one of said contiguous rooms overlapping areas characterized as another of said contiguous rooms. (See fig. 1:1-5, col. 3, lines 19-40).

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Re claim 13, an apparatus according to claim 4, wherein the frequency of the means for detecting is at least 1 Hz. (See col. 3, lines 57-58; images picked up at 30 fps is i.e. 30 Hz, which is at least 1Hz).

Re claim 14, an apparatus according to claim 13, wherein the frequency of the means for detecting is in a range of 7 to 30 Hz. (See col. 3, lines 57-58; images picked up at 30 fps is i.e. 30 Hz, which is in a range of 7Hz to 30Hz).

Claim 1 is a method claim corresponding to apparatus claim 4, thus it has been analyzed and rejected w/r to claim 4 above.

Re claim 2, a method as claimed in claim 1, wherein the body coordinates comprise both concentration point coordinates of a projection of a person (this is represented by " $x_i$ " and " $y_i$ " of area of dark spot in the " $W_i$ ", fig. 3, col. 4, lines 17-29, col. 5, lines 40-47) and of single part of the body of a person (dark spot represents head portion) as well as the outline coordinates of the person (window " $W_i$ ", fig. 3).

Re claim 3, a method as claimed in claim 1 for detecting and analyzing behavior of persons in a plurality of adjacent rooms, wherein at least one identification value (col. 4, lines 20-26; the identification value is the center of gravity of the head spot of a person being tracked) and respective coordinates (i.e. position of the person) are associated with a person, said identification value and respective coordinates being used for continuing to monitor said person when said person moves from one room to a room adjacent thereto (col. 4, lines 26-42).

Re claim 11, the method according to claim 1, wherein said at least one predetermined frequency is greater than 1 Hz. (See claim 13 above).

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Re claim 12, the method according to claim 11, wherein said at least one predetermined frequency is in a range of 7 to 30 Hz. (See claim 14 above).

**3. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuji as applied to claim 4 and further in view of Burt, US 5,063,603 and Conrad et al, WO 94/274408.**

Re claim 7, Tsuji fails to teach the sensor module further comprises first and second sensor modules, said second sensor module being associated with said first sensor module and being adapted for transmitting electromagnetic or thermal radiation for spectroscopic or thermal evaluation thereof as claimed.

Burt makes it well known and teaches a sensor module comprising first and second sensor modules, said second sensor module being associated with said first sensor module and being adapted for transmitting electromagnetic or thermal radiation for spectroscopic or thermal evaluation as claimed. (See fig. 2: 200a is first sensor module, 200b is second sensor module adapted for transmitting thermal IR radiation, both modules are being associated and integrated into a single sensing module 100. See col. 5, lines 21-26, col. 6, lines 36-51).

Taking the combined teaching of Tsuji and Burt as a whole, it would have been obvious to provide a sensing module comprising first and second sensor modules, said second sensor module being associated with said first sensor module and being adapted for transmitting electromagnetic or thermal radiation for spectroscopic or thermal evaluation as claimed for the benefit of employing thermal IR imaging to detect

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distance measurement of an object without being affected by varying ambient light in a room being monitored (Burt, col. 6, lines 43-48).

Re claim 8, Tsuji in view of Burt teaches using TV camera, but not specifically CCD camera as claimed. Conrad makes it well known and uses CCD type cameras for the same field of endeavor (fig. 1, p. 5, line 16). Taking the combined teaching of Tsuji, Burt and Conrad as a whole, it would have been obvious and advantageous to use a CCD type camera as an alternative to the conventional TV camera as taught in Tsuji in view of Burt due to the benefit of them being miniaturized which is suitable for discreet surveillance purposes.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**5. Claims 1, 4, 7, 9, 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burt, US 5,063,603.**

Re claims 4 and 9, Burt discloses an apparatus for detecting and analyzing the behavior of persons in at least one room in dependence on visual, audiovisual and/or auditory messages intended to influence actions and/or path of movement of said person in said at least one room (figs. 1-2, col. 3, lines 34-57), comprising

means (figs. 1-2: 100) for detecting time-dependently by at least one predetermined frequency (col. 3, line 68 – col. 4, line 30; this segment discusses

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detecting any given wave-energy spectrum which implies a predetermined frequency), the position coordinates of each person (fig. 3:300), the body coordinates of each person, turns and rotations of each person's body and/or parts thereof as well as each person's posture and/or attitude of each person's extremities from the person's entry into up to the person's exit from the room (fig. 3:302, fig. 4:401; orientation transformation determines the person's attributes as claimed),

the detecting means (figs. 1-2:100) comprising at least one sensor module (fig. 2:200a-200b),

Burt discusses placing the detecting means 100 comprising sensors 200a-200b in a room (fig. 2), but does not specifically disclosed placing the detecting means 100 in an upper position of each room such as a ceiling as recited in claims 4 and 9. However, Burt does not preclude the detecting means from being placed in an upper position of each room as claimed. In fact, it would have been obvious in Burt to place the detecting means at a high position such as a ceiling for the benefit of obtaining an overall view of the room and all the subjects in the room,

said sensor module (fig. 2:200a-200b) being adapted for detecting the electromagnetic radiation (col. 4, lines 1-2) from each said person present in said room, and at least one image processing module (fig.1: 110,114) and at least one database module (fig.1:116,118) , said sensor, image processing and database modules being operatively connected together (fig. 1).

Re claim 7, Burt also teaches a sensor module comprising first and second sensor modules, said second sensor module being associated with said first sensor



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module and being adapted for transmitting electromagnetic or thermal radiation for spectroscopic or thermal evaluation as claimed. (See fig. 2: 200a is first sensor module, 200b is second sensor module adapted for transmitting thermal IR radiation, both modules are being associated and integrated into a single sensing module 100. See col. 5, lines 21-26, col. 6, lines 36-51).

Re claims 13-14, the sensor module in Burt (figs. 1-2:100) is a television camera module. Thus, it is implied that the camera module operates at least at 30 fps or 30 Hz, which meets the claimed limitations of claims 13-14.

Claim 1 is a method claim corresponding to apparatus claim 4. It has been analyzed and rejected w/r to claim 4. Burt discloses both a system and method for detecting and analyzing behavior of persons in a room.

**6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Burt as applied to claims 4 and 7 further in view of Conrad et al, WO 94/274408.**

Re claim 8, Burt teaches using TV camera, but not specifically CCD camera as claimed. Conrad makes it well known and uses CCD type cameras for the same field of endeavor (fig. 1, p. 5, line 16). Taking the combined teaching of Burt and Conrad as a whole, it would have been obvious and advantageous to use a CCD type camera as an alternative to the conventional TV camera as taught in Tsuji in view of Burt due to the benefit of them being miniaturized which is suitable for discreet surveillance purposes.

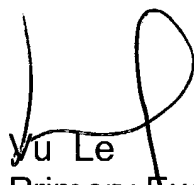
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### **Contact**

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vu Le whose telephone number is 703-308-6613. The examiner can normally be reached on M-F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on 703-305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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